

1 **CLAIMS**

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3 1. A media processing system interface comprising:

4 an input, coupled to a source to access content from the source in response

5 to requests for said content; and

6 two or more outputs, each coupled to a media processing subsystem,

7 wherein the interface routes at least a subset of the received media content to

8 individual ones of the two or more outputs based, at least in part, on the media

9 type of the subset.

10

11 2. A media processing system interface according to claim 1, wherein

12 the media processing system interface is a software object, exposed from an

13 operating system on computing system implementing the media processing

14 system.

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16 3. A media processing system interface according to claim 1, wherein

17 the interface receives requests from each of the one or more media processing

18 subsystems, and initiates seeks into the source for the requested content.

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20 4. A media processing system interface according to claim 1, wherein

21 the interface receives requests from each of the one or more media processing

22 subsystems for particular source content, ignores the requests received from all but

23 one of the media processing subsystems.

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1 5. A media processing system interface according to claim 1, wherein a
2 source processing chain comprising each of the media processing subsystems
3 coupled through the interface to the source is removed from an active filter graph
4 upon completion by each of the media processing subsystems.

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6 6. A media processing system interface according to claim 5, wherein a
7 first of the media processing subsystems instructs a second of the media
8 processing subsystems that it no longer requires content from the source, and the
9 second media processing subsystem informs a render engine controlling the filter
10 graph to remove the source chain when it no longer requires content from the
11 source.

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13 7. A media processing system interface according to claim 6, wherein
14 the render engine determines whether the source chain may be required
15 subsequently in this, or another media processing project and, if so, caches the
16 source chain for later retrieval and integration in a processing project.

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18 8. A media processing system interface according to claim 5, wherein a
19 first of the media processing subsystems request to remove the source processing
20 chain is ignored, wherein only the second of the media processing subsystems can
21 effectively request the source chain to be removed from the active processing
22 project.

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1 **9.** A media processing system interface according to claim 5, wherein a
2 render engine controlling the project determines whether at least a subset of the
3 source filter chain will subsequently be required and, if so, caches the source chain
4 in local memory for subsequent retrieval and integration into a processing project.
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6 **10.** A media processing system according to claim 1, wherein the
7 interface receives media content from a source and parses the received content into
8 its disparate content types.
9

10 **11.** A media processing system according to claim 10, wherein each of
11 the media processing subsystems take one type of the parsed media content for
12 subsequent processing.
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14 **12.** A media processing system according to claim 10, wherein the
15 disparate content types include audio media content and video media content.
16

17 **13.** A media processing system interface according to claim 1, wherein
18 the media processing subsystems include a processing chain of software objects
19 which manipulate the content retrieved from the source in some fashion.
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21 **14.** A media processing system interface according to claim 1, wherein
22 the interface is a filter in a media processing filter graph.
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1 **15.** A media processing system interface according to claim 1, the input
2 is a software object, exposed from the operating system of a computer
3 implementing a media processing system, and implemented as an input pin.
4

5 **16.** A media processing system interface according to claim 1, wherein
6 each of the outputs are software objects, exposed from the operating system of a
7 computer implementing a media processing system, and implemented as instances
8 of an output pin.
9

10 **17.** A media processing system interface according to claim 1, wherein
11 the interface is a parser object, implemented in a filter graph by render engine to
12 enable multiple processing subsystems to access and receive content from a single
13 instance of a source.
14

15 **18.** A storage medium comprising a plurality of executable instructions
16 which, when executed, implement a media processing system interface according
17 to claim 1.
18

19 **19.** A computer system comprising:
20 a storage medium having stored thereon a plurality of executable
21 instructions; and
22 an execution unit, coupled to the storage medium, to execute at least a
23 subset of the plurality of executable instructions to implement a media processing
24 system interface according to claim 1.
25

1 **20.** A filter graph implemented within a media processing system, the
2 filter graph comprising:

3 a video processing subsystem to process video content;
4 an audio processing subsystem to process audio content; and
5 a parser object, coupling one or more of the video processing subsystem
6 and the audio processing subsystem to a single instance of a multimedia source, to
7 selectively provide the audio subsystem and video subsystem with requested audio
8 content and video content, respectively.

9
10 **21.** A filter graph according to claim 20, wherein the parser is
11 comprised of at least one input, coupled to the source, and two outputs, one each
12 coupled to the video processing subsystem and the audio processing subsystem.

13
14 **22.** A filter graph according to claim 20, wherein the parser object
15 receives request for content from each of audio processing subsystem and the
16 video processing subsystem and serializes such requests, processing them in
17 chronological order.

18
19 **23.** A filter graph according to claim 20, wherein the parser object
20 receives requests for content from each of the audio processing subsystem and the
21 video processing subsystem and ignores requests received on all but a selected one
22 of such audio processing subsystem or video processing subsystem.

1 **24.** A filter graph according to claim 23, wherein the video processing
2 subsystem is the selected one from which requests for content are acted upon,
3 while requests from the audio processing subsystem are ignored.

4
5 **25.** A filter graph according to claim 20, wherein the parser object
6 receives indications from one or more of the audio processing subsystem and/or
7 the video processing subsystem that the source is no longer required and, upon
8 verifying that neither processing subsystem requires further content from the
9 source before a source filter chain including the parser object and both media
10 processing subsystems may be removed from the filter graph.

11
12 **26.** A filter graph according to claim 25, wherein the parser object
13 informs a render engine that the source filter chain is no longer required,
14 whereupon the render engine may remove the source filter chain from the filter
15 graph.

16
17 **27.** A filter graph according to claim 26, wherein the render engine
18 determines whether the source filter chain will be required subsequently in this or
19 another filter graph and, if so, caches the entire source filter chain for later
20 integration in the an appropriate filter graph.

21
22 **28.** A filter graph according to claim 20, wherein the parser object only
23 responds to an indication that the source is no longer required from a select one of
24 the media processing subsystems.
25

1 **29.** A filter graph according to claim 28, wherein the select media
2 processing subsystem is the video processing subsystem.

3
4 **30.** A filter graph according to claim 29, wherein the parser object
5 ignores indications that the source is no longer required from the audio processing
6 subsystem.

7
8 **31.** A filter graph according to claim 29, wherein an element of the
9 video processing subsystem checks with other media processing subsystems
10 coupled to the parser object to determine whether they, too, no longer require
11 content from the source before instructing the parser object that the source is no
12 longer required.

13
14 **32.** A filter graph according to claim 29, wherein the parser ensures that
15 both subsystems no longer require content from the source before unloading
16 source filter strings comprising the audio subsystem and the video subsystem.

17
18 **33.** A filter graph according to claim 20, wherein the parser receives
19 indications from each of the audio and video subsystems requesting content and
20 resolves such requests based, at least in part, on a priority of when such content is
21 required in support of filter graph execution.

22
23 **34.** A computing system comprising:
24 a storage medium having stored therein a plurality of executable
25 instructions; and

an execution unit, coupled to the storage medium, to execute at least a subset of the plurality of executable instructions to implement a filter graph according to claim 20.

35. A storage medium comprising a plurality of executable instructions which, when executed, implement a media processing system including a parser object, to couple one or more media processing subsystems to a single instance of a source to provide each of the coupled media processing subsystems with requested content from the source.

36. A storage medium according to claim 35, wherein each of the media processing subsystems process media content of a particular type, and wherein the parser object parses out that type of media content from the source for provision to each of the media processing subsystems.

37. A storage medium according to claim 35, wherein the parser object receives multiple requests for content from the media processing subsystems and serializes such requests, processing them in chronological order.

38. A storage medium according to claim 35, wherein the parser object receives requests for content from each of the one or more media processing subsystems, but only acts on requests received from a single media processing subsystem.

1 **39.** A storage medium according to claim 35, wherein the parser object
2 receives indications from each of the one or more media processing subsystems
3 that content from the source is no longer required, but ignores all but those
4 indications received from a select media processing subsystem.

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6 **40.** A storage medium according to claim 35, wherein the parser object
7 receives an indication from one of a plurality of coupled media processing
8 subsystems that content from the source is no longer required, and verifies that
9 none of the remaining plurality of coupled media processing subsystems require
10 further content before releasing the source.

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